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FEDERAL ENERGY REGULATORY COMMISSION

Modernizing Electricity Market Design **Docket No. AD21-10-000**

Technical Conference On Resource Adequacy In The Evolving Electricity Sector

Panel 3: Alternative Approaches for PJM Capacity Market

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I. Introduction

Thank you for the opportunity to share my ideas on alternative approaches for the PJM capacity market.

How new generation is procured will be critical to reliable, affordable de-carbonization of the power system. We will need over 1000 GW of new clean energy generation investment in the next 15 years.[1] FERC and state resource adequacy and generation procurement policies will be critical to accomplishing this feat.

II. End MOPR

The first priority is to end the policy that clearly interferes with state energy policies and raises costs for consumers. Just because certain market participants sell environmental attributes to states does not give FERC or the ISO/RTOs any basis to exclude them from selling their reliability services. This is a barrier to entry, discriminatory, and unjust and unreasonable – and bears no relation to the purpose of market power mitigation measures. PJM, the other ISO/RTOs, and FERC should do everything they can to reduce the impact and ultimately eliminate broad application of MOPR as soon as that is procedurally possible.

MOPR was put in place to mitigate defined buyer-side market power and should be returned to that policy. Longstanding FERC and court policy says that actual or potential market power justifies intervention, but there is no such rationale for intervening to mitigate state policy. As the DC Circuit has noted, "[I]n a competitive market, where neither buyer nor seller has significant market power, it is rational to assume that the terms of their voluntary exchange are reasonable, and specifically to infer that the price

[1] http://www.2035report.com/wp-content/uploads/2020/06/2035-Report.pdf

is close to marginal cost, such that the seller makes only a normal return on its investment."[2] FERC's MOPR decisions over the past several years rely on an indefensible treatment of states as "quasi-buyers" due to their entirely permissible choices regarding energy and environmental policies. The Commission should now unwind this broad and inappropriate intrusion into state policies.

It is especially striking to me that the organization charged with keeping the lights on for 13 states has been forced to spend so much time and resources on adjusting and arguing about the bids proposed for projects which do not represent any kind of market power. This should not be their job. PJM should not be expected to police state policies nor to be experts in how commercial clean energy transactions work. They have different, and important, other responsibilities. The solution is for them to focus on their responsibilities and not interfere with states or clean energy transactions.

To the extent revenues are an issue for those providing reliability services and capacity, that can be addressed by accurately defining the needed reliability services, competitively soliciting the service, and paying for their value on a resource-agnostic basis.

III. Avoid unnecessary centralization

Wind, solar, and storage companies are able to sell different products to different counterparties, or off-takers. Before the broad MOPR, they were selling capacity to PJM, compliance RECs to utilities subject to state Renewable Portfolio Standards, energy in the spot energy market, energy in long term private bilateral markets, ancillary services in PJM spot ancillary services markets, and voluntary RECs to corporate energy users. That is normal and natural. When financing generation, all of these revenue streams are estimated and factored in before committing the large amounts of capital required. This approach is not unfamiliar to energy infrastructure investors, or investors of any sort.

There may be some advantages to having an *option* to have a central clearinghouse for environmental attributes. While FERC should consider proposals that states or utilities bring before it, all proposals need to be carefully examined and implications considered. There are quicker simpler ways of undoing MOPR than undertaking the creation of another central market structure. Let's fix the MOPR first, then take a careful reasoned approach to reforming RPM writ large.

IV. Future resource adequacy

I believe resource adequacy remains very important and challenging, and the challenges are greater because we need to create new ways of operating and planning for a different type of portfolio. I hope FERC, RTO/ISOs, and others can quickly turn to these important questions once we get beyond MOPR. Where renewable energy and

[2] Tejas Power Corp. v. FERC, 908 F.2d 998, 1004 (D.C. Cir. 1990)

storage provide a large amount of the energy, I believe the following principles should apply to resource adequacy:

A. FERC and RTO/ISOs should ensure some entity is accountable for procuring sufficient energy at all times. Even in the fully de-regulated Australian market, there is regulatory review to make sure procurement has taken place. A state might choose a utility, a state agency, competitive retail suppliers, or some other entity, but in all cases some party needs to be financially and physically equipped to procure sufficient power for all situations. States need to do more to specify who is in charge of resource procurement for their retail customers. FERC can work to make sure states are clear on assigning this role. A heavy handed approach of FERC and RTOs being in charge of procurement will surely prevent RTO expansion to other regions where they are needed, and lead to continued conflicts with states.
B. More options should be provided for trading capacity on a bilateral basis, and not always through a mandatory central auction.
C. Peak reserve margin should be replaced as a metric of resource adequacy as it is becoming less and less meaningful. Solar energy, supplemented by batteries, can meet most traditional summer peak loads. Reliability-threatening scarcity events have been occurring at off-peak times of day and times of year on many systems. System planners need to re-focus on times and places where resource adequacy is a concern, and develop new metrics to address those situations.
D. Correlated outages need much more attention. Gas, nuclear, and coal plants, as well as renewables, can have highly correlated outages, and yet they are given full capacity credit based on the assumption that each plant's outages are independent.
E. Seasonal markets may be needed. Gas, coal, and nuclear plants, in addition to renewables have capacity values that vary by season in predictable ways. Using a single annual capacity requirement and single annual capacity credit for each resource is inaccurate and provides a poor signal for resource entry and exit. It is inefficient to require resources to perform in the same way all year round, as PJM market rules currently require. A seasonal market that allows each resource to provide its value in certain seasons, and not be penalized for not performing as well in other seasons would be better for both customers and suppliers, and provide much clearer incentives for market entry based upon seasonal demands.
F. Performance is everything. I recognize that the Northeast RTO/ISOs have bolted on performance aspects to their capacity markets. Yet they are still based on the original construct designed to have a certain number of MWs of steel in the ground and rely on must-offer obligations for production. Planned and forced outages, weather-induced de-rates, and various other factors have a massive impact on whether those resources perform. Both requirements and performance incentives are likely needed not just a certain MW count.
G. Renewables and storage have capacity value. A high-renewable energy system operates differently than the 20th Century system. Renewable energy sources

distributed across wide areas, connected by transmission and seamless energy markets can collectively provide most of the energy for most power systems at most times. The more diverse the types of renewables and geographically diverse they are located, the more the value. Diversity should be encouraged by accounting for it in capacity value determinations.

H. Long-term contracting should be encouraged and facilitated. All generation sources rely on long-term contracting to find low-cost financing, and customers benefit from using low-cost capital. Market designs should fully accommodate long-term contracting. It does not have to be the job of the RTO. States can play a key role in making sure there are long term buyers of the energy needed to serve retail load.

I. Accurate spot energy and reliability services prices are needed. At times of scarcity, prices should be higher, reflecting resources' value to keeping the lights on. These scarcity-based prices should occur at the right times and places to encourage both operational decisions and entry/exit decisions. Storage and demand response, as well as flexible wind and solar, are able to respond to prices for energy and ancillary services when prices are accurate and based on value.

V. Responses to specific questions

The agenda for this panel includes the following questions and I provide responses below.

1. If the Commission were to direct revisions to the currently effective MOPR and replace it with a MOPR designed to address only buyer-side market power (herein referred to as a Targeted MOPR), could such an outcome be just and reasonable? Would it be sustainable to remove the MOPR completely without making additional changes to other PJM market rules? Please explain and discuss the trade-offs among the various options that should be considered.

Response:

Yes, replacing the current "broad" MOPR with a Targeted MOPR that only addresses buyer-side market power would be just and reasonable. Market power mitigation should be used for just that – to protect consumers from an exercise of market power not to dictate their capacity choices. I do not believe the just and reasonable standard was ever meant to replace consumer choice and I include in this state policies which are a reflection of consumer choice within that state.

Yes, it would be sustainable to remove the broad MOPR completely. Any services needed for reliable operation can be procured at the competitive prices that result from competitive solicitation and buyers and sellers transacting, as long as market power is mitigated.

2. Would removing the current MOPR in PJM and simply replacing it with a Targeted MOPR shift costs among states or otherwise favor certain states over other states? Could it result in the shifting of one state's public policy preferences to another state with different state policies? Please explain any such concerns. If such cost shifting may occur, is that an inevitable consequence of any state regulation of any kind, and is it the Commission's role to address such cost shifting? If cost shifting is a concern, what are the ways to mitigate any such concerns?

Response:

No. The standard should not be whether public policies have an impact on market prices. In every industry, public policies have an impact on prices and quantities. If we want to talk cost shifting, let's talk about all of the cost shifting that is already going on. Why does everyone assume that cost shifting can only exist with respect to renewable development. The concept could be applied to every state policy in existence now, or in the past. For example, the people in Maryland that want to buy clean energy have been paying, and are paying, millions if not billions in dollars to the fossil fuel plants in other states that have been getting their capacity dollars since 2007, whether that is what they want or not. And the fossil fuel facilities have actually been supported by state policies regarding fossil fuel extraction, or through past regulated cost recovery. This is also cost-shifting. What makes the support of renewable and its supposed cost shifting more important that the cost shifting that has been going on for years already? This gets to the essential nature of a regional market model.

3. Is the independent power producer model compatible with a capacity market construct that does not account for the fact that certain resources receive out-of-market support? Why or why not?

Response:

Yes. Each resource should be able to sell every product it is qualified to sell, consistent with Commission precedent such as Order No. 841. Some sell more capacity than energy. Some sell more environmental attributes than capacity. Some sell more ancillary services than other products. Each resource should be able to sell what it offers on a competitive basis.
Additionally, I think we need to redefine the whole concept of "out-of-market" support. If consumers want to provide an alternative revenue stream to their resources of choice, how is that out-of-market? If the so called 'market' is stymying that selection than it's the market that needs to change to ensure those preferences are incorporated, not the other way around.
Let consumers and states make the resource choices they want and then a centralized residual market can procure the remainder needed for reliability. We need to get away from this 'if I build it, you have to buy it" mentality and let consumers choose their flavor of energy and capacity. If the IPP wants the consumer to buy their flavor than build what the consumer wants to buy.

4. Would removing the expanded MOPR in PJM and replacing it with a Targeted MOPR present resource adequacy or reliability issues in the short term? Are there such issues in the long term?

Response:

No. In the long run, each product that is needed can be procured in sufficient quantities at sufficient prices to attract and retain the resources needed. In the short run, there is ample capacity in PJM and having adequate capacity is not a concern. We have time to come up with a long-term sustainable well thought out market construct.

5. Would removing the expanded MOPR in PJM and replacing it with a Targeted MOPR address the concerns that are driving certain states to consider leaving the Reliability Pricing Model (capacity market) via the Fixed Resource Requirement (FRR)? What are the benefits and costs associated with state decisions to remain in the capacity market versus opting for the FRR?

Response:

I believe MOPR is the central issue driving states to seriously consider FRR. And who can blame them? They will of course speak for themselves on this topic.

6. In PJM, are or should there be options other than FRR for states that want to achieve resource adequacy outside of the capacity market? Are these options compatible with continuing a capacity market for states that do wish to participate in it?

Response:

Yes, more options should be provided for bilateral trading of capacity and other products. More flexibility should be provided to whichever entity is assigned by states to be in charge of power procurement. Centralized markets should be options, not a requirement.

7. Aside from removing the expanded MOPR and implementing a Targeted MOPR, are there other mechanisms that can be used to better integrate state supported resources in PJM's capacity market? If so, what are those mechanisms and how would they work?

Response:

There is not a need for the RTO or IMM to manage environmental attribute procurement. It is not their competency, nor should it be. To the extent PJM needs to be involved, it can continue to use and refine its Generation Attribute Tracking System (GATS), which facilitates state policies by being able to track RECs. All PJM needs to

know is which capacity is attributable to which load, then net those out of both the supply and demand and run a backstop residual reliability model to procure whatever left-over is needed.

8. Would it be better to implement a resource carve out in PJM (in which capacity supply and demand that contract bilaterally outside of the market are removed from the capacity auction) instead of a Targeted MOPR (in which all capacity supply and demand still pass though the capacity auction)? An approach along those lines could, for example, allow states to procure capacity resources directly, and then hold a capacity auction to meet any remaining resource adequacy requirements. Is this meaningfully different than a Targeted MOPR? Why? What are the relative pros and cons of the two approaches?

Response:

MOPR should simply be ended. In addition, as a separate matter, more options for bilateral contracting should be available. Capacity markets should become more residual in nature. Trying to maintain a singular centralized auction will become unnecessarily complicated as we move further and further into a decentralized technology and consumer driven world. A complication that is unnecessary.

9. If the Commission were to direct replacement of the current MOPR in time for the 2023/24 Base Residual Auction, when would such action be needed to limit any auction delay?

Response:

I will be interested in seeing how PJM can quickly implement a targeted MOPR, as it should do, and as FERC should direct.